

Color centers transient absorption and ultra-short pulse lasing from $\text{LiLu}_{0.7}\text{Y}_{0.3}\text{F}_4\text{:Ce}^{3+}$ active medium

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Abstract

© 2016 IEEE. We have obtained the single pulse laser oscillation with 400 ps pulse duration at 311 nm from $\text{LiLu}_{0.7}\text{Y}_{0.3}\text{F}_4\text{:Ce}^{3+}$ crystal. The single pulse laser oscillation was obtained from intracavity loss modulation via pump-induced color centers bleaching. Modulation of intracavity losses is regulated via color centers concentration.

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Keywords

lasers, rare earth materials, ultraviolet sources